

REMARKS

Upon entry of the foregoing amendments, Claims 1-46 remain pending.

Claims 1-46 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kozacka et al. (U.S. Pat. No. 5,881,799) in view of Hagar et al. (U.S. Pat. No. 4,673,026). Applicants have amended Claims 1, 18 and 34 as discussed further below.

Kozacka discloses a sealing element for a regenerative heat exchanger. The seal includes two members, each having a plurality of tabs and slots. See Kozacka, abstract. The tabs and slots interlock with each other. See Id. The tabs are flexible and can resiliently deform when the tabs make contact with the sealing surface of the heat exchanger. See Id.

Hagar discloses a sealing arrangement for an air preheater. See Hagar, abstract. The sealing arrangement includes radial seal plates (86) or circumferential seal plates (131). See Hagar, col. 5 at lines 34-42; col. 8 at lines 52-55; and Figures 7-14. The sealing arrangement also includes sealing strips (101, 151) for use with the radial seal plates (86) and circumferential seal plates (131). See Hagar, col. 6 at lines 25-28; col. 9 at lines 35-38; and Figures 7-14. The sealing strips (101, 151) are "foil-like metal" seal strips that are "of a substantially thinner material" than the seal plates (86, 101) and are "substantially more flexible" than the seal plates (86, 131). See Hagar, col. 6 at lines 25-43; col. 9 at lines 35-40; and Figures 7-14. The sealing strips (101, 151) "yieldingly engage the sector plates (76) to effect sealing between the drum (48) and the housing (46)." See Hagar, col. 6 at lines 35-40. The sealing arrangement also includes backing strips (111) adjacent the sealing strips (101), which are of comparable thickness to the sealing strips (101) and "permit full yielding movement even to the extent where the radial sealing strips (101) will move out from between the clearance (98) between the radial seal plate (86) and the sector plate (76)." Hagar, col. 6 at line 64 – col. 7 at line 28.

Claims 1-17

However, neither Kozacka or Hagar, alone or in combination, teach or suggest, among other things, a seal assembly comprising a sealing section and a reinforcing member, "wherein the reinforcing member is positioned with respect to the sealing section so as to reinforce the sealing section when the sealing section is deformed in the second direction, the reinforcing member constructed to apply a counter-deflection force on the sealing section in a direction substantially opposite to the second direction to limit the deformation of the sealing section and

thereby inhibit damage to the sealing section as a result of the deformation during rotation,” as recited in amended Claim 1.

Though the Examiner asserts that Hagar discloses the reinforcing member of the seal assembly recited in Claim 1, the Examiner has provided no specific reference of where in Hagar such disclosure is found. As discussed above, Hagar discloses sealing strips (101) that are “substantially more flexible” than the seal plates (86), and which yieldingly engage the sector plates (76). The sealing strips (101) would not be capable of applying a counter deflection force to limit the deflection of the seal plates because the are “substantially more flexible” than the seal plates (86). Likewise, the backing strips (111) would not be capable of applying a counter-deflection force to limit the deflection of the sealing strips (101) because the backing strips (111) “permit full yielding movement” of the sealing strips (101).

Accordingly, Applicants respectfully submit that amended Claim 1 is patentable over Kozacka in view of Hagar. Applicants respectfully submit that no new matter has been added ant that the amendment is supported by at least the non-limiting embodiments discussed in paragraphs [0047]-[0049] and [0051] of the specification.

Claims 2-17 depend from amended Claim 1 and are likewise patentable over Kozacka and Hagar, not only because these claims depend from an allowable base claim, but also because each of these claims recites a unique combination of features not taught in the cited art. For example, Claim 12 recites that that “reinforcing member further provides a biasing force in a direction relative to the movement of the first and second resilient members.” As discussed above, the sealing strips (101) of Hagar are substantially more flexible than the seal plates, and the backing strips (111) permit full yielding movement of the sealing strips (101), so the sealing strips (101) and backing strips (111) would not be capable of applying a biasing force, as recited in Claim 12.

Claim 18-33

Similarly, Applicants have amended Claim 18 to recite, among other things, a regenerative air preheater device comprising a seal assembly comprising a resilient member and a reinforcing member, “the reinforcing member configured to apply a force on the resilient member in a direction generally opposite to the second direction to limit the deformation of the

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resilient member, thereby inhibiting damage to the seal assembly as a result of the deformation during rotation.”

As discussed above in connection with Claim 1, Applicants respectfully submit that Kozacka and Hagar do not teach or suggest, among other things, a reinforcing member configured to apply a force to limit the deformation of the resilient member, as recited in amended Claim 18. Applicants respectfully submit that no new matter has been added and that the amendment is supported by at least the non-limiting embodiments discussed in paragraphs [0047]-[0049] and [0051] of the specification. Accordingly, Applicants respectfully submit that amended Claim 18 is patentable over Kozacka and Hagar.

Claims 19-33 depend from amended Claim 18 and are likewise patentable over Kozacka and Hagar, not only because these claims depend from an allowable base claim, but also because each of these claims recites a unique combination of features not taught in the cited art.

Claim 34-46

Applicants have also amended Claim 34 to recite, among other things, a seal assembly for a regenerative comprising a sealing member and a reinforcing member, “the reinforcing member constructed to exert a force on the sealing member in a direction opposite the second direction to limit the deformation of the sealing member to thereby strengthen the structural rigidity of the sealing member and inhibit damage to the sealing member as a result of the deformation.”

As discussed above in connection with Claim 1, Applicants respectfully submit that Kozacka and Hagar do not teach or suggest, among other things, such a reinforcing member that exerts a force on the sealing member in a direction opposite the second direction to limit the deformation of the sealing member and thereby strengthen the structural rigidity of the sealing member. Applicants respectfully submit that no new matter has been added and that the amendment is supported by at least the non-limiting embodiments discussed in paragraphs [0047]-[0049] and [0051] of the specification. Accordingly, Applicants respectfully submit that amended Claim 34 is patentable over Kozacka and Hagar.

Claims 35-46 depend from amended Claim 34 and are likewise patentable over Kozacka and Hagar, not only because these claims depend from an allowable base claim, but also because each of these claims recites a unique combination of features not taught in the cited art.

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CONCLUSION

Applicants respectfully submit that the claims are in condition for allowance in view of the above remarks. Any remarks in support of patentability of one claim, however, should not be imputed to any other claim, even if similar terminology is used. Additionally, any remarks referring to only a portion of a claim should not be understood to base patentability on that portion; rather, patentability must rest on each claim taken as a whole. Applicants respectfully traverse each of the Examiner's rejections and each of the Examiner's assertions regarding what the prior art shows or teaches, even if not expressly discussed herein.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call Applicants' attorney in order to resolve such issue promptly.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

KNOBBE, MARTENS, OLSON & BEAR, LLP

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By: 

Josué A. Vihalta
Registration No. 54,511
Attorney of Record
Customer No. 20,995
(951) 781-9231